Atty Docket: 210491US00 (4081-05200)

Patent

AMENDMENTS TO THE SPECIFICATION

Please replace paragraph [0020] on pages 12 and 13 with the following:

After the mixing described above, each sample was tested immediately at 100°F in accordance with the RP13B-1. Samples 1 and 2 were tested only for apparent viscosity (AV), whereas samples 3, 4, and 5 were tested for AV, plastic viscosity (PV), yield point (YP), gel strength (Gels), and fluid loss at low-temperature/low-pressure (FL). The results of the tests performed are shown in Table 1B below. The fluid loss of sample 3, which contained a terpolymer as described herein was only 1.1 mL. In contrast, control samples 4 and 5 exhibited much higher amounts of fluid loss (i.e., more than 100 mL) than sample 1. Further, sample 3 has significantly higher AV and PV than control samples 2 and 3. However, in plain tap water, the sample with Terpoly-1 (sample 1) has much lower viscosity than sample 2, which contained a terpolymer as described in U.S. Patent No. 6,124,445 6,124,245.

Table 1A

Materials	Mixing Time, minutes	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
Wellform 13.2, g				130	130	130
Tap water, mL	1	200	200	70	70	70
Gem GP Glycol, mL	1	2112		5	5	5
Polymer, g	20	Terpoly-1, 2.50	Terpoly-2, 2.50	Terpoly-1, 3.50	Terpoly-2, 3.50	None
Bentonite, g	1			8	8	8
Rev dust, g	60			12	12	12

Wellform 13.2: A K-formate solution available from Albemarle Corp. and having a density of 13.2 pounds per gallon

Gem GP Glycol: A glycol available from Baroid Drilling Fluids, Inc.

Bentonite: Simulates drill cuttings Rev dust: Simulates drill cuttings

Terpoly-1: A terpolymer prepared by polymerizing a mixture of 91 wt.% Na-AMPS, 5.5 wt.% NVP, and

3.5wt.% acrylamide, all weight percentages being by total weight of the monomers

Terpoly-2: A terpolymer prepared by polymerizing a mixture of 50 wt.% Na-AMPS, 5 wt.% NVP, and 45wt.% acrylamide as described in U.S. Patent No. 6,124,445 6,124,245, all weight percentages being by total weight of the monomers

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Table 1B

Property	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5
600	72	122	32	16	13
300			16	8	G
AV	36	61	16	8	6.5
PV			16	8	7
YP			00	0	-1
Gels			1/1	1/1	1/1
FL			1.3	117.0	146.0

AV: The apparent viscosity in centipoises PV: The plastic viscosity in centipoises

YP: The yield point in lb/100 ft²

Gels: The 10-second and 10-minute gel strengths in lb/100 ft²

FL: The fluid loss in mL/30 min. at 100°F and 100 psi